QUALITY MATTERS

Spring 2004

A Publication of the TRIC/PLUK Library

# Violence and Brain Injuries

*By Nell Eby and Dr. Mary Car*

We live in a fast-paced world. Every day we venture forth onto the most dangerous place on the planet — our public highway system, where we all purchase our tickets to the traumatic brain injury lottery. These are chances we take and choices we make — vehicle crashes are the leading cause of traumatic brain injury (CDC, 2001).

However, there is a difference between our free choice and individuals who make no choice. I am referring to the 1.5 million women in the United States who are violently assaulted every year by an intimate partner (Smith, *et. al.*, 2001, p. 323). One in four women will be raped or physically assaulted by an intimate partner in her lifetime. Women are more likely than men to be murdered by an intimate partner. American Indian and Alaska Native women are more likely than other racial groups to report being raped or physically assaulted. Traumatic brain injury can occur as a consequence of physical violence. Violence has surpassed vehicle crashes as the leading cause of traumatic brain injury related death, and it is the third ranked cause of traumatic brain injuries overall (CDC, 2002).

Each year, at least 1.5 million Americans sustain a traumatic brain injury and there currently are at least 5.3 million Americans living with a disability as a result of brain injury (CDC, 2002). A violence-related traumatic brain injury occurs when a physical assault to the head causes injury or damage to the brain. A traumatic brain injury can change the way a person thinks, acts, feels, and moves his or her body. A traumatic brain injury can result in coma or even death.

Two classifications of brain injuries are closed head and open head injuries. When the head is suddenly impacted and there is no fracture to the skull, the event is classified as a closed head injury. Shaken baby syndrome describes a constellation of symptoms from a closed head injury that can occur when a baby is shaken violently by a perpetrator.

An open head injury occurs when an object penetrates the skull. For example, a gunshot wound can cause this type of injury. In addition to the bullet entering the brain, bone fragments from the skull can enter the brain and cause further injury (Brain Injury Association of America, 2004).

The prevalence of women with disabilities being physically, sexually and emotionally abused has reached alarming rates. In "Violence Against Women with Disabilities" published in *Quality Matters*, Dubin (2004) described the need to discuss the issue of violence against women with disabilities and focused

**Continued on the next page**

***Brain Injuries,* continued from page 1**

on women with mental retardation and developmental disabilities. There is a pervasive sense of urgency among disability advocates, victim advocates and service organizations to confront this issue through collaboration. Dubin expressed the need for a coordinated community response to ending violence against women with disabilities.

Head injuries are a common occurrence to women in domestic violence situations. Men who beat women frequently target the head. "There is evidence to suggest that male attackers may tend to avoid striking the face so that injuries will not be apparent to onlookers; instead, blows to the back of the head may be more common" (Corrigan, J.D. *et al.* 2001, p. 71). "Women with injuries resulting from assault were 13 times more likely than those with unintentional injuries to have sustained injuries to the head" (Sadovsky, 1999, p. 981).

Strangulation, often referred to as "choking," can cause a loss of consciousness, and decrease the amount of oxygen that is delivered to the brain. "Battered women who are choked could sustain brain injuries through the effects of anoxia or hypoxia (complete or partial lack of oxygen to the brain)" (Valera, E.M., Berenbaum H., 2003, p. 797). Strack, *et. al.* (2001) describes strangulation as a "potentially lethal level of violence."

## National Resources

- Brain Injury Association of America
  Contact the Brain Injury Association of America at (800) 444-6443 or (703) 761-0750, or visit their Web site at **http://www.biausa.org** for more information and resources about brain injury and to locate state affiliates and services in your area.
- National Child Abuse Hotline: (800) 4-A-CHILD [800-422-4453]
- National Domestic Violence Hotline: (800) 799-SAFE [7233]
- National Resource Center for Traumatic Brain Injury: **http://neuro.pmr.vcu.edu/**

Women who suffer a traumatic brain injury present a variety of symptoms. Traumatic brain injury is known as the silent epidemic because many of these injuries are not obvious to others. The degradation and deterioration of the quality of life becomes evident when mothers become unable to care for their children, hold down a job or effectively deal with the emotions of daily life. Some symptoms of traumatic brain injury include: headaches, dizziness, inability to concentrate, irritability, confusion, vision or hearing problems, fatigue, memory loss, depression, sleep difficulties, anxiety, and mood swings.

Although loss of consciousness is a typical symptom of traumatic brain injury, there does not have to be loss of consciousness for a mild traumatic brain injury to occur. These symptoms create a disruption in daily living and can be either temporary or permanent. Latent symptoms of brain trauma can appear weeks later when the individual experiences cognitive or emotional problems. Rarely will a woman visit her doctor to report an assault, rather she will present other problematic issues such as depression. "Even when very definite clues were offered and documented ("Hit by fist," "Hit by lead pipe"), this information was rarely expanded upon and in most cases it was actively obscured ... thus a woman was discharged with a potentially life-

**Continued on the next page**

*QUALITY MATTERS*

**Editor** Janice Sand • **Circulation** 700 • **Layout** Rosanna Buehl, *QBMM Publishing,* Billings Montana • 406.248.3802 • rosanna@qbmm.com

This is a publication of *Parents, Let's Unite for Kids,* a private nonprofit organization founded in 1984 by a group of parents of children with disabilities and chronic health problems. This project is funded (in part) by the Developmental Disabilities Program of Montana DPHHS. Any statements contained herein do not necessarily reflect the opinion of the Department.

TRIC/PLUK Library
516 N 32nd Street
Billings MT 59101-6003

**Toll Free** (800) 222-7585, in Montana
**Voice/TT** (406) 255-0540
**FAX** (406) 255-0523

**E-mail** jsand@pluk.org
**URL** http://www.pluk.org

## Montana Resources

- **The Montana Coalition Against Domestic and Sexual Violence (MCADSV), Helena**

MCADSV's 105 members include domestic violence programs and shelters across the state, as well as individual members from a variety of professions that interface with domestic violence. The organization is dedicated to increasing awareness and understanding of domestic and sexual violence. For information on local assistance, please call the MCADSV at (406) 443-7794. The Web site is **http://www.mcadsv.com/**

- **The Billings Area Family Violence Task Force**

The Task Force is committed to coordination of existing community resources and continued education for the purpose of reducing family violence, and is dedicated to serving victims of all ages. Each year the Task Force sponsors the McGuire Memorial Conference on the prevention of family violence. For more information, contact (406) 254-6038.

- **Brain Injury Association of Montana**

The BIAM is dedicated to reduce the incidence of brain injury in the state of Montana through prevention activities. Contact information for support groups across Montana can be acquired by calling (406) 541-6442 or contacting the Brain Injury Association of Montana on their Web site at **http://www.biamt.org/**

***Brain Injuries,* from page 2**

threatening condition that had not been addressed" (Warshaw, 1991, p. 48).

Information derived from preliminary studies is just beginning to reveal a correlation between the difficulties reported by women who are physically abused and brain injuries from violence. There is still much to be learned. Albeit it is understood that lack of oxygen to the brain and physical assault can cause a brain injury, there are no generalizable statistics or numbers indicating how often this occurs in our society as a whole. It is known that women who go to the emergency room may not identify themselves as having been abused, because of fear or shame. It is also known that the service providers that intend to help those who sustain physical abuse may not always be able to identify who has been abused, if they do not ask, if there are no obvious physical signs of injury, or if the women choose not to disclose how they were injured. Researchers that conduct prevalence studies report that "as many as 35% of women who are treated at emergency rooms show signs of abuse, but only about 5% of them are identified as victims" (Feldman, 1992).

Research on traumatic brain injuries and women who experience physical domestic violence needs to continue. The current level of knowledge of traumatic brain injury by the general public is limited. Subjective methods of investigation by law enforcement personnel and diverse methods of assessment and inconclusive documentation by medical providers all point towards a need for standardization of the methodology used to gather relevant and precise data concerning traumatic brain injury. Knowledgeable service providers would increase the repertoire of medical examinations and criminal investigations. Ultimately, standardized data would contribute significantly to the creation of a universally safe environment for women with disabilities.

Crimes must be reported and addressed. The perpetrators of these crimes must not be free to re-offend. Beneath the obvious there lies an insidious nature to these events of abuse. Predators are preying upon people who may be especially vulnerable members of our society — women with disabilities, that may have limited or no defense against crime or evil and no recourse other than to become assaulted. As Dubin stated, there needs to be a collaborative community response to end violence against women with disabilities.

There is a myriad of web resources that offer information and materials to assist advocates, service providers and victims in the prevention of violence and the ensuing disabilities among women. There are also excellent web resources that provide information and materials relevant to brain injuries. Some of the local

**Continued on the back page**

TRIC/PLUK Library
516 North 32nd Street
Billings, MT 59101-6003

Address Service Requested

Non-Profit Org.
U.S. Postage Paid
Billings, MT
Permit No. 88

***Brain Injuries,* from page 3**

and national organizations that are worthy of attention are highlighted in the sidebars on the previous pages ✳

## About the authors

**Dr. Mary Car** is a Clinical Doctor of Occupational Therapy, currently employed as the Information and Resource Manager for the Brain Injury Association of America, Alexandria, VA. She is a writer and editor for prevention and educational materials concerning brain injuries.

**Nell Eby** is a Traumatic Brain Injury Coordinator for the Montana Center on Disabilities. She is currently the Vice-Chairman of the Billings Area Family Violence Task Force.

## References

Brain Injury Association of America. (2004). *Types of Brain Injury.* http://www.biausa.org (29-Feb-04)

Centers for Disease Control (CDC). (2001). *Injury Fact Book 2001-2002.*

Centers for Disease Control (CDC), MMWR Surveillance Summaries. (2002) *Surveillance for Traumatic Brain Injury Deaths — United States: 1989-1998: December 6, 2002/51* (SS10), 1–16. http://www.cdc.gov/mmwr (29-Feb-04)

Corrigan, J.D., Wolfe, M., Mysiw, W.J., Jackson, R.D., Bogner, J. A. (2001). Early Identification of Mild Traumatic Brain Injury in Female Victims of Domestic Violence. *Women's Health 1* (184–90).

Dubin, M. (2004). Violence Against Women with Disabilities. *Quality Matters*. Winter 2004.

Feldman, M. K. (1992). Are you doing all you can for these patients? *Medical Economics, 69* (12) 108 (5)

Sadovsky, R. (1999). Presentation of Abuse-Related Injuries Among Women. *American Family Physician. 981* (1). *Health Reference Center Index*. (29-Feb-04)

Smith, D.J., Mills, T., Taliaferro E.H. (2001). Violence: Recognition, Management, and Prevention. *The Journal of Emergency Medicine, 21* (3), 323–329.

Strack, G.B., McClane, G.E., Hawley, D. (2001). Violence: Recognition, Management, and Prevention — A Review of 300 Attempted Strangulation Cases, Part 1: Criminal Legal Issues. *The Journal of Emergency Medicine 21* (3), 303–309.

Valera, E.M., Berenbaum, H. (2003). Brain Injury in Battered Women. *Journal of Consulting and Clinical Psychology. 71* (4), 797–804.

Warshaw, C., Poirier, S. (1991). Hidden stories of women. *Second Opinion, 17* (2) 48 (14). *Health Reference Center Index* (28-Feb-04).